Public Comment on FCC GN Docket No. 25-133

Reduce or eliminate restrictions on amateur radio emissions types and codes (FCC part 97)

Paul M. Elliott / WB6CXC / Turn Island Systems LLC

FCC Part 97 states:

The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

- *(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.*
- ***(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.***
- ***(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.***
- ***(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.***
- *(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.*

The current rules regarding emissions types and codes are overly restrictive, which discourages amateur radio operators from exploring modern communications technology. In particular, the following regulations contain many restrictions that limit amateur radio experimentation and development:

§ 97.305 (Authorized emission types): This contains restrictions on usage within various amateur sub-bands by listing permissible emission types. These are overly restrictive and actually fairly archaic, especially when looking at the permissible characteristics of the listed “emission types authorized”.

§ 97.307 (Emission standards): While sections (a) through (e) of are appropriate, section (f) contains many prescriptive requirements for digital codes (not the same thing as encryption!), which limit amateur ability to experiment with many long-established digital communication techniques, let alone the ability to develop newer modulation and encoding protocols.

§ 97.309 (RTTY and data emission codes): This likewise requires that only certain protocols be used.

§ 97.311 (SS emission types): This restricts SS (Spread Spectrum) to the 220 MHz and above bands. There are certainly applications where SS on the lower-frequency bands would be a useful technique.

Many of these restrictions and prescriptions are the result of slow accretion over time as new technology has developed. There is no good reason to continue with these archaic restrictions, which put significant obstacles in the way of experimentation and training. Rather than the current "Whatever is not explicitly permitted is prohibited" regulations I suggest that most these regulations be eliminated. The current regulations on power levels, spurious signal and harmonic levels, and occupied bandwidth, along with the prohibition on deliberate interference will protect operations within the amateur bands, as well as protect the nearby commercial and other non-amateur bands.

By allowing experimentation and development using modern and new techniques these changes will further the goals of amateur radio:

- Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.
- Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.
- Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

Thank you,

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Paul has been a ham radio operator since 1975, and currently holds an Extra-class license. He is a retired electronics engineer, and is now active in designing and developing amateur radio equipment, working closely with the HamSci group in their study of ionospheric propagation and similar research. Paul is currently Vice President of TAPR (Tuscon Amateur Packet Radio), a longstanding non-profit organization that has been at the forefront of amateur digital communications. Paul is a founder of Turn Island Systems LLC, where we develop and sell radio accessories used in propagation research, and SDR receiver optimization.